

ARTICLE

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Trends in employment-based health insurance coverage: evidence from the National Compensation Survey

Data from the BLS National Compensation Survey show that access to employer-provided health insurance declined from 1991 to 2002, chiefly because of narrower access among part-time workers. Then, from 2003 to 2012, access exhibited a significant further drop and participation also fell significantly. Over the latter period, nonunion workers, part-time employees, and lower wage workers, as well as those employed at small establishments, had a lower incidence of employer-provided health insurance.

In this article, we use the Bureau of Labor Statistics (BLS, the Bureau) National Compensation Survey (NCS) to examine trends in employment-based health insurance (EBHI) coverage, also called employer-provided health insurance coverage. In contrast to the situation in most other developed countries, employers are the most important source of health insurance coverage in the United States, particularly for the nonelderly population. According to calculations by Elise Gould¹ using the Current Population Survey, 58.3 percent of those under age 65 were covered by EBHI in 2011, with 22.7 percent having some form of public insurance and 17.9 percent not having insurance at all. (Nongroup, or direct-purchase, coverage accounted for the remaining 1.1 percent.) When attention is restricted to workers between ages 18 and 64, the importance of EBHI, not surprisingly, increases. In 2011, 68.2 percent of these individuals were covered by EBHI.

Although the reasons employers have historically been so central in providing health insurance in the United States are complex,² the fact that they do play such a role means that health insurance has important effects on the labor market. Health insurance makes up the biggest share of noncash benefits received by private industry workers, and that share has grown from 32 percent in 1991 to 39 percent in 2012.³ Not only has it grown in importance among all noncash benefits, but the increase in costs employers pay for health insurance has outstripped the affected workers' wage growth: health insurance paid by employers tripled from 1991 to 2012, while wages paid increased by 83 percent.⁴ From an individual's standpoint, health insurance considerations may influence the decision to work, to stay with a particular employer, and to retire. In light of these and related factors, the importance of tracking trends in EBHI coverage is evident.

Another consideration making an examination of EBHI timely is the ongoing implementation of the Affordable Care Act of 2010,⁵ which will have major impacts on employer-based health care plans as provisions in the Act which mandate that firms provide health care coverage for most employees take effect. That mandate will certainly have an impact on the incidence of EBHI and, likely, the premiums paid for coverage. To have a baseline with which to assess the law's effects on EBHI, we examine trends and patterns in the health insurance data collected by the Bureau before Congress enacted the law.

The Bureau has collected information on EBHI since 1979, first as part of the Employee Benefits Survey and later as part of the NCS. Although the exact nature of what has been collected has evolved over time, our focus in this article will be on access, participation, and takeup rates⁶ for health insurance, as well as on the employer and employee premiums paid for that insurance. The many provisions of the Affordable Care Act have the potential to affect the levels and trends of all three rates, because those provisions will influence the decisions by employers to offer health insurance, the

decision by workers to accept such insurance, and the terms on which such insurance is offered.⁷ Along with the uncertainty ahead, much remains to be understood about what occurred in recent decades. Accordingly, we turn to an examination of BLS data to fill in some of the gaps. An appendix provides details on the underlying data.

Table 1 shows the access rates in employer-provided health benefits for private industry since 1991,⁸ for all workers and for full- and part-time workers separately. Later, we examine takeup and participation rates as well, over the more recent period from 2003 to 2012.

Table 1. Percentage of workers with access to employer-provided health insurance, private industry, 1991–2012

Year	All workers	Part-time workers	Full-time workers
1991	77.3	28.8	87.8
1992	76.7	26.8	88.3
1993	76.4	24.4	88.6
1994	74.6	21.1	88.5
1995	72.9	20.0	88.1
1996	71.8	19.9	87.4
1997	71.6	19.5	86.5
1998	71.2	18.8	86.5
1999	71.3	18.6	86.7
2000	71.4	19.3	87.4
2003	71.8	22.7	86.9
2004	70.8	20.6	86.6
2005	71.1	21.6	87.0
2006	71.2	21.8	86.7
2007	71.1	24.1	85.6
2008	71.4	24.4	85.9
2009	71.4	23.8	86.5
2010	71.2	24.3	86.9
2011	69.8	23.4	85.9
2012	70.2	23.7	86.4

Note: Because the Employment Cost Index (ECI) sampling methodology changed in 2001 and 2002, those years are excluded from the analysis.

Source: Authors' calculations based on data from the Employment Cost Index and the National Compensation Survey.

In the more than two decades from 1991 until 2012, the access rate for all workers declined from 77.3 percent to 70.2 percent. There was little change among full-time workers, whose access rates fell from 87.8 percent to 86.4 percent (although they were higher at some points during the period examined). The drop among part-time workers was much steeper, however, from 28.8 percent to 23.7 percent.

The trends look somewhat different if the entire span is divided into two parts: 1991–2000 and 2003–2012. Over the earlier period, a 5.9-percentage-point drop in access was attributable in large part to reduced access among part-time workers; there was little change among full-time workers. During

the second period, there was again a decline in access among all workers, but smaller than the previous period's falloff. Most of the 2003–2012 downturn was due to an increase in the share of part-time workers in the NCS sample that occurred toward the end of the period.⁹

In the academic literature, the decade of the 1990s is considered a period of declining EBHI coverage, though not necessarily because of a drop in access rates. Using the 1987 National Medical Expenditure Survey and the 1996 panel of the Medical Expenditure Panel Survey, Philip Cooper and Barbara Schone found that any shrinking of coverage was the result of a drop in the takeup rate of coverage offered, rather than a reduction in the rate at which firms offered health insurance to their workers.¹⁰ Using the Current Population Survey, David Cutler¹¹ also found that declining takeup rates were responsible for the reduction in EBHI coverage and concluded that the drop was attributable to an increase in employee premium contributions.

Like Cooper and Schone, Jessica Vistnes, Alice Zawacki, Kosali Simon, and Amy Taylor used the Medical Expenditure Panel Survey for their research.¹² They estimated that EBHI coverage declined from 57 percent in 2000 to 54 percent in 2008, but because of different proximate causes than in the 1990s. These authors found that declining coverage rates in small firms were due to both falling offer rates¹³ and falling takeup rates. In the largest firms, offer rates were fairly unchanged but takeup rates still fell. In its 2013 Survey of Employer-Sponsored Health Benefits, the Kaiser Family Foundation and Health Research and Educational Trust found that coverage declined from 62 percent to 56 percent between 1999 and 2013. Takeup rates fell for both small and large employers.

NCS microdata enable us to consider more detailed aspects of the incidence of employer-provided health insurance during the decade from 2003 to 2012. Several notable dimensions of the longstanding levels of benefits are identified, as are several noteworthy trends over the decade.

Table 2 shows various breakouts of the 2003–2012 trends for health plans, and table 3 shows the same for medical plans.¹⁴ In particular, the two tables show the applicable rates of access, participation, and takeup (defined here as participation divided by access) for different establishment size categories, union–nonunion and full-time–part-time workers, and workers whose job-based wage rates were in one or another of the four quartiles of the wage distribution, as computed from the job-based wages recorded in the NCS microdata.¹⁵ The tables also break out health plan access, participation, and takeup by various establishment-level wage groupings.¹⁶ The group differences in both levels and trends are qualitatively similar for the two tables, so we focus our commentary on table 3.

Table 2. Access, takeup, and participation of employer-provided health plans in private industry, 2003–2012

Category	Access				Takeup				Participation			
	2003	2012	Change	Percent change	2003	2012	Change	Percent change	2003	2012	Change	Percent change
All workers	71.9	70.2	-1.7	-2.3	80.0	78.5	-1.5	-1.9	57.5	55.1	-2.4	-4.2
By size:												
Fewer than 50	55.5	53.6	-1.9	-3.4	74.0	74.0	.0	.0	41.1	39.7	-1.4	-3.4
50–99	71.2	69.0	-2.3	-3.2	78.6	75.4	-3.2	-4.1	56.0	52.0	-4.0	-7.1
100–499	83.1	82.3	-.8	-1.0	81.4	78.8	-2.6	-3.3	67.7	64.8	-2.8	-4.2
500–999	88.9	87.3	-1.5	-1.7	88.7	84.6	-4.1	-4.6	78.8	73.9	-4.9	-6.3
1,000–2,499	90.0	87.7	-2.3	-2.6	80.6	85.3	4.7	5.9	72.5	74.8	2.3	3.1
2,500 or more	96.7	94.8	-2.0	-2.0	92.1	87.3	-4.8	-5.2	89.1	82.7	-6.4	-7.1
Unionization:												
Nonunion	69.5	67.6	-1.9	-2.7	78.3	77.2	-1.1	-1.4	54.4	52.2	-2.2	-4.0
Union	96.1	95.4	-.8	-.8	92.8	87.4	-5.4	-5.8	89.2	83.3	-5.8	-6.6
Status:												
Full time	86.9	86.4	-.5	-.6	82.3	80.4	-1.9	-2.3	71.5	69.4	-2.1	-2.9
Part time	22.7	23.7	.9	4.2	52.1	59.2	7.1	13.5	11.8	14.0	2.2	18.3
Job-based wage quartile:												
First	33.3	30.8	-2.5	-7.4	57.6	57.8	.2	.3	19.2	17.8	-1.4	-7.2
Second	75.2	71.2	-4.0	-5.4	75.2	72.6	-2.6	-3.4	56.6	51.7	-4.9	-8.6
Third	88.3	85.9	-2.5	-2.8	85.1	82.4	-2.7	-3.2	75.2	70.7	-4.4	-5.9
Fourth	91.7	92.9	1.2	1.3	87.3	86.3	-1.0	-1.2	80.1	80.2	.1	.2
Establishment-based wage quartile:												
First	35.2	31.5	-3.7	-10.5	61.1	59.4	-1.7	-2.8	21.5	18.7	-2.8	-13.1
Second	74.3	70.1	-4.2	-5.7	75.4	71.2	-4.2	-5.6	56.0	49.9	-6.1	-11.0
Third	84.0	85.2	1.2	1.5	83.8	82.5	-1.3	-1.6	70.4	70.3	-.1	-.1
Fourth	88.2	94.0	5.8	6.6	85.8	86.8	1.0	1.1	75.7	81.6	5.9	7.8

Source: Authors' calculations based on data from the National Compensation Survey.

The top row of table 3 presents the overall trends in the incidence of employer-provided medical insurance over the decade. A 5.5-percent decline in medical plan participation was composed of a 1.4-percent decline in access and a 4.1-percent decline in takeup. The overall decline and the decline in takeup are statistically significant, but the precision of the data does not allow us to verify whether the decline in access is statistically significant.¹⁷

Table 3. Access, takeup, and participation of employer-provided medical plans in private industry, 2003–2012

Category	Access				Takeup				Participation			
	2003	2012	Change	Percent change	2003	2012	Change	Percent change	2003	2012	Change	Percent change
All workers	71.0	70.0	-1.0	-1.4	74.5	71.4	-3.1	-4.1	52.9	50.0	-2.9	-5.5
By size:												
Fewer than 50	54.7	53.5	-1.2	-2.2	71.3	69.3	-2.0	-2.8	39.0	37.1	-1.9	-5.0
50–99	70.9	68.7	-2.2	-3.2	74.6	69.3	-5.3	-7.2	53.0	47.6	-5.4	-10.1
100–499	81.9	82.1	.1	.2	76.0	71.1	-5.0	-6.5	62.3	58.3	-4.0	-6.4
500–999	88.2	86.8	-1.4	-1.6	79.0	75.5	-3.5	-4.4	69.7	65.6	-4.1	-5.9
1,000–2,499	89.1	87.6	-1.5	-1.7	73.2	73.9	.7	1.0	65.2	64.7	-.5	-.7
2,500 or more	95.7	94.6	-1.1	-1.2	78.4	77.8	-.6	-.8	75.0	73.6	-1.5	-1.9
Unionization:												
Nonunion	68.7	67.4	-1.3	-1.9	72.4	70.0	-2.4	-3.4	49.8	47.2	-2.6	-5.2
Union	94.4	95.2	.8	.8	90.3	81.5	-8.7	-9.7	85.2	77.6	-7.6	-8.9
Status:												
Full time	85.8	86.2	.3	.4	76.7	73.2	-3.5	-4.6	65.8	63.1	-2.8	-4.2
Part time	22.7	23.5	.8	3.5	47.3	52.7	5.3	11.3	10.8	12.4	1.6	15.2
Job-based wage quartile:												
First	32.9	30.7	-2.2	-6.7	51.8	51.8	.0	.0	17.0	15.9	-1.1	-6.7
Second	74.0	70.9	-3.1	-4.2	70.1	66.2	-3.9	-5.6	51.9	46.9	-5.0	-9.6
Third	87.8	85.7	-2.0	-2.3	79.9	75.6	-4.3	-5.4	70.1	64.8	-5.3	-7.6
Fourth	90.5	92.7	2.2	2.4	81.2	78.0	-3.2	-3.9	73.5	72.3	-1.2	-1.6
Establishment-based wage quartile:												
First	34.8	31.4	-3.4	-9.8	56.2	53.0	-3.2	-5.8	19.6	16.6	-2.9	-15.0
Second	73.3	69.8	-3.5	-4.8	70.0	61.3	-8.7	-12.4	51.3	42.8	-8.5	-16.6
Third	83.0	84.9	1.9	2.3	78.9	71.1	-7.8	-9.8	65.5	60.4	-5.1	-7.8
Fourth	87.1	93.8	6.7	7.6	79.7	76.9	-2.8	-3.5	69.4	72.1	2.7	3.9

Source: Authors' calculations based on data from the National Compensation Survey.

Next, the table breaks out medical plan data by establishment size. Looking at the incidence levels in either year reveals a strong positive relationship between establishment size and access to a medical plan.¹⁸ By contrast, establishment size is weakly and nonmonotonically related to plan takeup, if at all. Hence, the pattern among participation rates mirrors that among access rates. Vistnes and colleagues find a similar pattern when concentrating on firm size rather than establishment size.¹⁹ Those authors also indicate that participation declined the least among the largest employers; they attribute the difference to lower declines in access rates among those firms. Though not statistically significant, our results are consistent with those of Vistnes and colleagues in showing smaller declines in participation among large establishments, but they do not indicate any particular pattern in the extent to which the decrease in participation was attributable to a decline in plan access or takeup.

Union–nonunion differences in medical plan incidence are also quite stark: for a given year, union workers are much more likely to have access to a plan and are more likely to take up a plan if they have access. These disparities persisted between 2003 and 2012, although the difference in takeup narrowed, so union–nonunion differences in participation decreased over the decade. A similar story unfolded over the decade in the differences between full-time and part-time workers: a stark contrast in participation rates persisted, but narrowed, driven primarily by a narrowing in differences in takeup rates.

But perhaps the most dramatic results shown in tables 2 and 3 are in the breakouts by wage quartile. Very large differences are seen between the top and bottom quartiles of the job-based wage distribution among all three incidence variables; for example, in 2003, there was a 56.5-percentage-point difference in medical plan participation rates between those quartiles (see table 3), a disparity that persisted over the decade. The table suggests that this difference in participation rates was sustained as a balance between a widening in access rate differences and a narrowing in takeup rate differences; however, we cannot verify this observation with statistical significance. A consideration of breakouts by establishment-based wage quartiles similarly reveals large inherent differences in the cross section between the highest wage quartile and the lowest wage quartile among all three incidence measures, but this time the participation and access differences grew significantly over the decade.

Tables 4, 5 and 6 show the results of a similar analysis performed on other elements of employer-provided health insurance: those plans covering dental care, vision-related services, and prescription drugs, respectively. At the overall level, these components of health insurance showed very different trends over the decade. Dental care evolved somewhat analogously to medical care, exhibiting a modest (and, in this case, statistically insignificant) decline in participation, with similar movements in access and takeup. Vision coverage, however, underwent a significant decline in participation, all of it through a decline in access; and prescription drug participation *increased* dramatically during this period, with all of the increase (and more) attributable to increases in access.

Table 4. Access, takeup, and participation of employer-provided dental plans in private industry, 2003–2012

Category	Access				Takeup				Participation			
	2003	2012	Change	Percent change	2003	2012	Change	Percent change	2003	2012	Change	Percent change
All workers	46.4	45.4	-1.0	-2.2	79.0	77.4	-1.5	-1.9	36.6	35.1	-1.5	-4.1
By size:												
Fewer than 50	26.9	26.5	-.4	-1.4	77.1	76.6	-.4	-.5	20.7	20.3	-.4	-1.9
50–99	41.8	41.5	-.3	-.7	78.8	74.4	-4.4	-5.6	32.9	30.9	-2.1	-6.2
100–499	58.3	55.7	-2.6	-4.4	78.9	75.8	-3.1	-3.9	46.0	42.2	-3.7	-8.1
500–999	67.0	66.5	-.5	-.8	83.0	79.4	-3.6	-4.3	55.6	52.8	-2.8	-5.1
1,000–2,499	71.7	75.4	3.7	5.1	77.9	79.8	1.9	2.5	55.8	60.2	4.3	7.7
2,500 or more	86.3	81.6	-4.6	-5.4	81.3	83.5	2.2	2.8	70.1	68.2	-1.9	-2.8
Unionization:												
Nonunion	43.4	42.4	-1.0	-2.3	77.0	76.9	.0	-.1	33.4	32.6	-.8	-2.3
Union	77.0	74.3	-2.7	-3.5	90.5	80.2	-10.3	-11.3	69.7	59.6	-10.1	-14.4
Status:												
Full time	57.0	56.8	-.3	-.5	80.7	78.8	-1.9	-2.4	46.0	44.7	-1.3	-2.8
Part time	11.6	12.6	.9	8.1	50.5	59.5	9.0	17.9	5.9	7.5	1.6	27.5
Job-based wage quartile:												
First	16.8	13.8	-3.0	-17.7	54.0	61.2	7.2	13.4	9.1	8.5	-.6	-6.7
Second	43.5	41.5	-2.0	-4.6	76.3	71.2	-5.2	-6.8	33.2	29.6	-3.7	-11.1
Third	56.2	55.5	-.7	-1.3	80.0	79.4	-.6	-.8	45.0	44.1	-.9	-2.0
Fourth	69.6	70.5	.9	1.3	85.9	82.7	-3.2	-3.7	59.8	58.3	-1.5	-2.5
Establishment-based wage quartile:												
First	19.6	15.0	-4.6	-23.5	60.7	60.4	-.3	-.5	11.9	9.0	-2.8	-23.8
Second	39.8	36.6	-3.2	-8.0	72.0	70.3	-1.6	-2.3	28.6	25.8	-2.9	-10.0
Third	52.1	56.8	4.7	9.0	80.2	79.3	-1.0	-1.2	41.8	45.0	3.2	7.6
Fourth	66.7	73.0	6.2	9.4	85.3	83.1	-2.2	-2.6	56.9	60.6	3.7	6.5

Source: Authors' calculations based on data from the National Compensation Survey.

Table 5. Access, takeup, and participation of employer-provided vision plans in private industry, 2003–2012

Category	Access				Takeup				Participation			
	2003	2012	Change	Percent change	2003	2012	Change	Percent change	2003	2012	Change	Percent change
All workers	28.9	24.6	-4.3	-14.8	75.3	75.9	0.6	0.8	21.8	18.7	-3.1	-14.1
By size:												
Fewer than 50	16.2	13.6	-2.6	-15.9	75.3	74.9	-.4	-.5	12.2	10.2	-2.0	-16.3
50–99	23.8	24.2	.3	1.5	70.1	73.4	3.3	4.7	16.7	17.7	1.0	6.2
100–499	36.2	27.4	-8.8	-24.3	76.1	76.2	.1	.1	27.5	20.9	-6.7	-24.2
500–999	43.1	41.5	-1.6	-3.7	80.8	77.9	-2.9	-3.6	34.9	32.4	-2.5	-7.2
1,000–2,499	47.6	43.6	-4.0	-8.4	75.4	77.4	2.0	2.7	35.9	33.8	-2.1	-5.9
2,500 or more	57.5	49.2	-8.4	-14.5	72.9	76.5	3.6	5.0	41.9	37.6	-4.3	-10.3
Unionization:												
Nonunion	26.0	21.3	-4.7	-18.0	73.0	75.0	2.0	2.7	19.0	16.0	-3.0	-15.8
Union	58.5	56.6	-1.8	-3.1	85.7	79.3	-6.4	-7.5	50.1	44.9	-5.2	-10.4
Status:												
Full time	35.1	30.5	-4.5	-12.9	76.6	77.2	.6	.8	26.9	23.6	-3.3	-12.3
Part time	8.8	7.6	-1.2	-13.5	57.8	60.7	2.9	5.1	5.1	4.6	-.5	-9.0
Job-based wage quartile:												
First	10.1	7.3	-2.8	-27.7	50.7	57.0	6.3	12.4	5.1	4.2	-1.0	-18.7
Second	24.7	20.3	-4.4	-17.7	70.6	73.0	2.4	3.4	17.4	14.8	-2.6	-14.9
Third	34.1	30.0	-4.1	-12.1	76.3	78.4	2.1	2.8	26.1	23.5	-2.5	-9.7
Fourth	47.1	40.8	-6.3	-13.3	82.4	78.9	-3.5	-4.2	38.8	32.2	-6.6	-17.0
Establishment-based wage quartile:												
First	9.9	7.2	-2.7	-27.1	57.0	60.9	3.9	6.9	5.7	4.4	-1.2	-22.0
Second	24.6	18.8	-5.8	-23.6	63.4	71.8	8.4	13.2	15.6	13.5	-2.1	-13.5
Third	30.4	30.3	-.1	-.5	79.1	77.9	-1.2	-1.5	24.0	23.6	-.5	-1.9
Fourth	44.9	42.2	-2.8	-6.2	81.2	78.9	-2.3	-2.9	36.5	33.2	-3.2	-8.9

Source: Authors' calculations based on data from the National Compensation Survey.

Table 6. Access, takeup, and participation of employer-provided prescription drug plans in private industry, 2003–2012

Category	Access				Takeup				Participation			
	2003	2012	Change	Percent change	2003	2012	Change	Percent change	2003	2012	Change	Percent change
All workers	49.5	69.0	19.4	39.2	74.2	71.4	-2.8	-3.8	36.8	49.3	12.5	33.9
By size:												
Fewer than 50	34.7	52.6	18.0	51.8	70.7	69.4	-1.4	-1.9	24.5	36.5	12.0	48.9
50–99	47.3	67.1	19.8	41.9	75.1	69.3	-5.8	-7.7	35.5	46.5	11.0	31.0
100–499	60.1	80.9	20.8	34.6	74.8	71.0	-3.8	-5.1	45.0	57.5	12.5	27.8
500–999	67.8	86.3	18.5	27.4	77.3	75.9	-1.5	-1.9	52.4	65.5	13.1	24.9
1,000–2,499	63.6	86.8	23.3	36.6	76.6	73.3	-3.3	-4.3	48.7	63.7	15.0	30.8
2,500 or more	74.3	93.5	19.2	25.8	77.0	78.0	1.0	1.2	57.2	72.9	15.7	27.4
Unionization:												
Nonunion	47.1	66.5	19.3	41.0	71.9	69.9	-1.9	-2.7	33.9	46.5	12.6	37.2
Union	74.2	93.5	19.3	26.0	89.7	81.8	-7.9	-8.9	66.6	76.5	9.9	14.8
Status:												
Full time	59.7	85.0	25.3	42.3	76.8	73.2	-3.6	-4.7	45.9	62.3	16.4	35.7
Part time	16.3	23.0	6.6	40.5	43.3	52.0	8.8	20.3	7.1	11.9	4.9	69.0
Job-based wage quartile:												
First	21.2	30.2	8.9	42.0	50.0	51.8	1.8	3.5	10.6	15.6	5.0	47.0
Second	50.4	69.7	19.3	38.3	70.0	66.0	-4.0	-5.7	35.3	46.0	10.7	30.4
Third	62.3	84.2	21.9	35.1	79.2	75.7	-3.5	-4.4	49.4	63.7	14.4	29.2
Fourth	65.0	91.8	26.9	41.3	80.8	78.1	-2.8	-3.4	52.5	71.7	19.2	36.5
Establishment-based wage quartile:												
First	20.4	31.2	10.7	52.5	56.1	53.3	-2.8	-5.0	11.5	16.6	5.1	44.8
Second	51.2	68.1	16.9	33.0	67.9	65.1	-2.8	-4.2	34.8	44.3	9.6	27.5
Third	60.5	83.7	23.2	38.4	77.4	75.5	-1.9	-2.5	46.8	63.2	16.4	34.9
Fourth	61.7	92.9	31.2	50.5	80.3	78.5	-1.8	-2.2	49.6	72.9	23.4	47.2

Source: Authors' calculations based on data from the National Compensation Survey.

Dental plan incidence also roughly mirrored medical plan incidence at levels lower than the all-worker level, showing similar patterns both in absolute percentages and in changes over time. In particular, differences in participation by full-time and union status diminished over the decade, while participation and access differences by establishment-based wage quartile widened. As with the overall level, any pattern in changes in dental plan incidence by establishment size was insignificant. Between-group differences in vision plans were also similar to those of medical plans in each year, but the changes in those differences over the decade are less clear and are generally insignificant. Among prescription drug plans, the same

cross-sectional relationships are again seen in the breakouts, but with the evolution of differences among the wage quartiles somewhat starker. For example, significant expansions in differences in access and participation rates between the top and bottom wage quartiles are seen.

Put together, the percentages shown in tables 2–6 tell a relatively coherent story. Various classes of workers, including nonunion, part-time, lower wage workers and those employed at small or lower wage employers, tend to have a lower incidence of employer-provided health insurance. During 2003–2012, as participation and access dropped significantly (and takeup dropped insignificantly) among the overall population, these between-group differences persisted. Some of the differences narrowed a bit over the decade, generally because of relative advances made by the lower incidence group in its takeup of available plans. At the same time, some of the differences expanded, generally through expansions in the between-group gaps in access. These between-group observations applied at various levels of detail: among health plans in general, as well as among the various subsets of health plans followed by the NCS—medical, dental, vision, and prescription drug plans—despite the fact that the overall trends among these plans varied.

The NCS also collects information on health premiums, including separate reports of employee-paid premiums and employer-paid premiums. The information is collected for each plan applicable to each job in the NCS sample, so there are often multiple premiums corresponding to a given job. The information may be summarized in a few different ways; one is to weight the different premiums by the corresponding participation rates. For example, consider a hypothetical job in which workers have access to two health plans: a high-premium plan charging \$100 per month and a low-premium plan charging \$0. We could compute a weighted average of the premiums by using the participation rates of workers in the two plans: if all the workers in the job use the low-cost plan, the relevant premium is \$0; if all the workers in the job use the high-cost plan, the relevant premium is \$100; if workers in the job split 50–50 between the plans, we could compute a weighted average premium of \$50 for the job; and so on. This is the approach used by the Bureau in producing reports containing information on premiums.²⁰

Table 7 uses this participation-weighted average approach to document premiums for medical plans in 2003 and 2012. The first three columns report on premiums applicable to single-person coverage, the last 3 on premiums applicable to family coverage. Within each type of coverage are shown the percentage of participants paying a premium greater than zero, the average premium paid by a participant, and the average payment paid by the employer to the participant's plan. Overall, the fraction of participants paying a premium grew from 77 percent to 82 percent over the decade, the average premium paid by employees for single coverage nearly doubled (from \$47 to \$90), and the average premium paid by employers for single coverage grew by over 70 percent (from \$212 to \$363). The overall trends among family coverage were qualitatively similar.

Table 7. Participant-weighted estimates of health insurance premiums, 2003–2012

Category	Single coverage									Family coverage								
	Percentage with employee premium greater than zero			Average employee premium			Average employer premium			Percentage with employee premium greater than zero			Average employee premium			Average employer premium		
	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change
All workers	77	82	7	\$47	\$90	92	\$212	\$363	71	85	92	7	\$196	\$394	101	\$496	\$885	
By size:																		
Fewer than 50	72	72	0	51	86	69	219	358	64	83	88	6	222	444	100	502	811	
50–99	74	78	6	45	93	104	213	362	70	83	91	10	196	463	136	462	802	
100–499	81	87	7	47	93	99	212	348	64	88	95	8	196	388	98	500	860	
500–999	80	91	14	44	94	113	202	373	85	89	94	6	173	348	101	491	980	1
1,000–2,499	77	90	16	43	90	110	208	394	89	85	92	8	160	306	91	494	1,071	1
2,500 or more	78	85	8	39	81	108	202	400	98	84	87	4	158	287	81	518	1,052	1
Unionization:																		
Nonunion	80	85	7	49	93	89	207	347	67	89	95	6	208	418	101	486	853	
Union	59	63	7	32	71	123	242	465	92	64	74	14	124	251	102	555	1,072	
Status:																		
Full time	77	82	6	46	88	89	213	367	72	85	92	7	194	391	101	500	897	
Part time	78	86	11	51	115	123	192	311	62	89	92	3	230	448	95	428	702	
Job-based wage quartile:																		
First	79	86	9	50	110	120	203	287	42	86	96	12	216	503	133	443	613	
Second	77	85	9	48	92	91	205	336	64	88	95	8	202	416	106	477	799	
Third	74	81	9	45	88	95	220	367	67	83	92	11	188	392	108	519	883	
Fourth	77	80	4	44	85	92	218	394	81	85	88	4	182	359	97	530	1,000	
Establishment-based wage quartile:																		
First	79	86	9	52	107	105	202	293	45	84	95	14	205	487	138	454	626	

Category	Single coverage									Family coverage								
	Percentage with employee premium greater than zero			Average employee premium			Average employer premium			Percentage with employee premium greater than zero			Average employee premium			Average employer premium		
	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change
Second	76	81	7	48	92	93	208	330	59	88	94	7	218	435	99	473	769	
Third	73	83	14	42	89	112	222	371	67	82	93	12	183	398	117	521	891	
Fourth	79	80	1	46	85	83	214	394	84	87	88	1	184	347	88	518	1,006	

Source: Authors' calculations based on data from the National Compensation Survey.

Below the all-worker level, we see several interesting dynamics. In 2003, single-coverage medical plan participants in smaller establishments systematically paid more in premiums than those in large establishments, but their employers also paid more. One explanation for this phenomenon is that the smaller employers had less bargaining power in negotiating premiums. By 2012, however, this employee premium pattern largely disappeared and the employer premium pattern reversed itself, evidencing differential (employer and employee) premium growth among both larger and smaller establishments. A key contributor to this trend appears to be a disproportionate decline in zero-premium plans for single coverage among the larger establishments: while the percentage of participants paying any premium stayed essentially constant among the smallest establishments, it grew significantly among the three largest establishment groups. A different trend is observed in family coverage. In 2003, employee premiums were negatively related to establishment size while employer premiums were roughly equal across establishment sizes. Over the next decade, the negative association between establishment size and employee premiums for family coverage increased and a positive association emerged between size and the employer premium.²¹ These trends imply a growing generosity gap between large and small establishments for family-coverage plans.

The results by wage quartile are again quite striking. In 2003, there was a weakly negative relationship between employee premiums and job-based wages; for example, workers in the lowest job-based wage quartile paid about \$6 more in monthly premiums for single coverage than those in the highest quartile. But that difference grew to about \$25 by 2012. A similar evolution occurred with the positive relationship between wages and employer-paid premiums: by 2012, workers in the bottom job-based wage quartile paid about 28 percent of combined (employer and employee) premiums, while the rest of the workers paid less than 20 percent. A similar dynamic is seen with wage quartiles based on establishment-level wages.

But participant-weighted measures such as those in table 7 fail to inform us about something important: which premiums were available to workers, regardless of whether they chose to participate? Tables 8 and 9 try to get at the answer to this question by presenting a number of statistics based on workers' access to plans. These data bear on the issue of how trends in plan takeup might be related to the premiums applicable to available plans. In addition, the data enable us to obtain a fuller description of the offerings enjoyed by workers who have more than one plan option. Each table (table 8 for single-coverage plans, table 9 for family-coverage plans) presents five different measures: (1) whether workers have access to at least one plan with no employee premium; (2) the average employee premium, with the data constrained to

only the highest premium faced by workers in each job; (3) the average employer premium, again with the data constrained to only the highest premium faced by workers in each job; (4) the average employee premium, with the data constrained to only the lowest premium faced by workers in each job; and (5) the average employer premium, again with the data constrained to only the lowest premium faced by workers in each job.

Table 8. Access-based estimates of health insurance premiums for single coverage , 2003–2012

Category	Percentage of workers offered zero-premium plan			Average maximum employee premium offered			Average maximum employer premium offered			Average minimum employee premium offered			Average minimum employer premium	
	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012
All workers	24	29	23	\$57.95	\$113.14	95	\$222.84	\$369.14	66	\$44.31	\$43.07	-3	\$200.51	\$157.10
By size:														
Fewer than 50	29	36	24	58.00	101.36	75	219.61	350.94	60	49.32	54.61	11	210.85	203.81
50–99	28	31	13	51.45	116.92	127	214.27	357.62	67	44.00	49.23	12	199.60	179.20
100–499	18	24	33	60.80	117.86	94	226.93	356.03	57	44.48	42.80	-4	198.71	141.18
500–999	19	24	28	59.58	117.75	98	227.41	388.97	71	39.38	31.16	-21	190.07	105.19
1,000–2,499	23	23	0	55.93	120.59	116	221.13	421.67	91	41.67	25.76	-38	194.08	108.67
2,500 or more	28	36	30	57.49	122.56	113	232.66	437.92	88	30.96	18.12	-41	184.63	101.58
Unionization:														
Nonunion	21	26	24	60.69	116.27	92	217.89	353.69	62	46.60	43.73	-6	196.67	147.14
Union	47	55	16	37.54	91.33	143	259.64	476.95	84	27.22	38.44	41	229.06	226.58
Status:														
Full time	24	30	26	57.57	111.06	93	224.78	376.77	68	44.26	40.33	-9	202.69	157.80
Part time	20	19	-9	62.62	134.98	116	199.02	289.11	45	44.82	71.80	60	173.81	149.72
Job-based wage quartile:														
First	19	16	-15	62.93	126.86	102	209.22	279.12	33	49.67	76.71	54	191.68	172.46
Second	24	25	3	57.28	114.33	100	214.98	340.52	58	46.22	50.19	9	198.02	168.51
Third	26	32	23	54.63	110.16	102	229.70	377.85	64	41.83	40.99	-2	208.50	164.93
Fourth	26	35	32	56.98	110.43	94	237.92	412.86	74	39.49	28.38	-28	204.20	136.05
Establishment-based wage quartile:														
First	19	17	-10	62.19	124.91	101	209.50	289.09	38	51.84	70.77	37	193.88	172.00
Second	26	27	4	55.38	113.29	105	216.10	328.35	52	45.47	56.08	23	202.02	184.29
Third	27	30	13	54.91	109.66	100	233.16	380.59	63	40.93	39.16	-4	208.61	160.11
Fourth	25	35	42	58.96	112.24	90	230.32	416.05	81	40.44	27.61	-32	198.66	129.10

Source: Authors' calculations based on data from the National Compensation Survey.

Table 9. Access-based estimates of health insurance premiums for family coverage , 2003–2012

Category	Percentage of workers offered zero-premium plan			Average maximum employee premium offered			Average maximum employer premium offered			Average minimum employee premium offered			Average minimum employer premium offered	
	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012	Percent change	2003	2012
All workers	14	15	13	\$237.04	\$467.56	97	\$520.03	\$902.03	73	\$193.23	\$200.28	4	\$461.68	\$361.15
By size:														
Fewer than 50	18	16	-11	248.91	477.06	92	493.65	796.53	61	220.12	273.14	24	470.10	442.15
50–99	17	13	-25	224.63	529.02	136	462.76	816.50	76	192.41	246.80	28	431.95	398.15
100–499	8	12	43	249.57	467.45	87	535.48	881.67	65	199.86	190.42	-5	459.53	338.15
500–999	6	17	196	222.17	422.81	90	571.46	1018.81	78	158.22	121.50	-23	469.03	273.15
1,000–2,499	11	16	49	201.32	416.36	107	532.50	1128.42	112	156.93	105.73	-33	467.74	277.15
2,500 or more	21	29	40	212.08	431.52	103	600.46	1162.16	94	130.22	70.87	-46	471.15	261.15
Unionization:														
Nonunion	10	12	18	249.20	489.55	96	509.88	872.09	71	205.03	209.95	2	453.85	341.15
Union	41	42	0	146.79	314.00	114	595.09	1111.24	87	105.66	132.71	26	519.55	498.15
Status:														
Full time	14	16	16	235.45	464.98	97	527.78	922.81	75	192.72	192.23	0	469.10	362.15
Part time	12	9	-21	256.49	494.62	93	425.56	684.38	61	199.42	284.37	43	371.09	346.15
Job-based wage quartile:														
First	11	5	-54	262.74	535.32	104	459.32	613.35	34	220.31	346.27	57	414.32	368.15
Second	11	11	-6	236.11	478.84	103	494.77	820.23	66	202.59	237.75	17	450.15	381.15
Third	16	16	0	221.58	462.44	109	545.35	915.16	68	182.10	193.40	6	488.19	374.15
Fourth	16	22	37	228.02	441.41	94	581.13	1047.02	80	168.11	130.20	-23	494.39	331.15
Establishment-based wage quartile:														
First	12	6	-53	253.18	522.19	106	463.72	637.57	37	219.46	315.94	44	425.28	370.15
Second	12	11	-9	245.69	486.98	98	492.02	772.52	57	214.06	273.64	28	454.33	412.15
Third	16	15	-5	224.31	465.83	108	548.13	924.94	69	181.10	187.31	3	488.41	362.15
Fourth	14	22	54	228.44	437.15	91	560.97	1062.66	89	168.08	120.66	-28	474.22	320.15

Source: Authors' calculations based on data from the National Compensation Survey.

The results shown in tables 8 and 9 expand on the story presented by table 7. Overall, we find that table 7's near doubling of participation-weighted average employee premiums was matched by a near doubling of the average maximum employee premium, but there was very little corresponding movement in the average minimum employee premium. In other words, the range of premiums available to workers expanded greatly from 2003 to 2012, with premiums growing at the top of the range and the average premium at the bottom of the range remaining roughly constant. A similar dynamic unfolded with respect to employer-paid premiums, but in this case the minimum employer payments actually fell significantly (by about 20 percent) while the maximum employer payments increased by around 70 percent. This dynamic suggests that employers reacted to rising health care costs by allowing some plans to rise in costs as well but also by increasingly offering other, low-cost, low-benefit plans as options. Note, however, that the substantial increases seen in table 7 among the participation-weighted averages suggest that most of the workers confronting this new, expanded range of premiums tended to opt for the higher premium plans (presumably to maintain their insurance levels) instead of taking the low-cost options.

Expansions in the range of plans offered were much more pervasive among larger establishments than smaller establishments. Average minimum employee premiums grew insignificantly among small establishments but declined significantly among large establishments, and a similar association between the trend and establishment size prevailed among minimum employer premiums. These numbers illustrate a further point: the negligible change in the overall average minimum employee premium reflects significant declines in the minimum plan offered by some fraction of establishments. Meanwhile, maximum employer and employee premiums for single coverage both grew much more slowly among small establishments than they did among large establishments.

Finally, the results by wage quartile shown in tables 8 and 9 reinforce the findings from participation-weighted averages in table 7: lower wage workers saw a relative deterioration of benefits in almost every measure. Relative to workers in the top wage quartile, workers in the bottom wage quartile suffered a greater decrease in the availability of no-premium plans, saw their maximum and minimum employee premiums grow the most, and experienced the smallest growth in their maximum employer premiums. But they did benefit, at least in a relative sense, in one way: their minimum employer premium declined by less than did the average minimum employer premium among workers in the top wage quartile.

IN THIS ARTICLE, WE USED BLS DATA to examine access to employer-provided health insurance since 1991. For the period beginning in 2003, we were able to fashion a more detailed analysis, assessing access, takeup, and participation rates, as well as examining patterns in employee and employer premiums. For the longer period, we noted a decline in access rates, owing to narrowing access among part-time workers. Focusing on the more recent period, we presented evidence that various classes of workers, including nonunion, part-time, lower wage workers and those employed at small establishments, tend to have a lower incidence of employer-provided health insurance. During 2003–2012, as participation and access dropped significantly (and takeup dropped insignificantly) among the overall worker population, these between-group differences persisted. Some of them narrowed a bit over the decade, generally because of relative advances made by the lower incidence group in their takeup of available plans. At the same time, other differences expanded, generally through expansions in the between-group gaps in plan access. The average premium paid by employees and employers increased substantially over the decade, with lower wage workers especially

hard hit by increased employee payments. These movements in the average premium were accompanied by a widening in the range of plans offered, as low-cost plans became more prevalent, especially among large establishments and higher wage workers. All these trends provide an interesting backdrop as the health insurance system enters into a period of anticipated change.

Appendix: data

The data in the first half of table 1 (for the years 1991–2000), supporting estimates of health insurance access rates between 1991 and 2000, come from Employer Cost Index (ECI) samples that predated the full ECI integration into the comprehensive NCS. Many of these earlier samples were designed to collect compensation data solely for the purpose of estimating the ECI, a Principal Federal Economic Indicator measuring the trend in compensation costs. Although the ECI is designed to survey compensation costs, including employer-provided benefits, ECI data provide sufficient information to derive the incidence of access to some types of benefits, including employer-sponsored health benefits.

The data used in the second half of table 1 (for the years 2003–2012) and all of tables 2 through 9, which together show annual health insurance access rates for 2003–2012 and details of health insurance incidence and premiums in 2003 and 2012, come from NCS microdata that were used to support NCS publications on the incidence of benefits during those years.²² These data are a continuation of the previous series, although they embody a different sampling methodology that was instituted when the NCS was integrated after 2000.²³ For 2003–2006, we exclude “legacy” records from the sample that were sampled under the previous approach.

Both the 1991–2000 ECI microdata and the 2003–2012 NCS microdata were collected at the job level, with observations having been randomly selected within each randomly selected establishment. For each job-based observation, information on the average wages of the workers in the job, as well as detailed information about the work schedule followed by these workers, were collected. Both sets of microdata also contain measures of employer costs for a wide variety of employer-provided benefits, including different categories of leave, supplemental pay, retirement-related benefits, legally required benefits, and various forms of insurance.²⁴

Plan access in the tables in this article is determined at the job level: if a plan is present that is applicable to the workers in the job, then the workers are considered to have access to the plan. Note that this statement does not necessarily imply that all workers in the job are eligible for the plan at the time of the survey: certain eligibility restrictions, such as minimum tenure, may apply. Health plan access is defined as access to any type of health plan (medical, dental, vision, or prescription drug). Because the 1991–2000 data do not have the relevant information for all observations, table 1 does not include breakouts by type of plan. As seen in tables 2 and 3, however, the access rates for all health plans and the access rate for medical plans are quite similar—a relationship that stands to reason in that few workers would be offered stand-alone drug, dental, or vision plans, but not offered coverage for medical care.

The access rates in table 1 are tabulated from the March quarterly surveys for each year. The ECI (and the NCS) collects compensation data for March, June, September, and December of each year, but annual NCS publications on the incidence of benefits generally refer to the March quarter because most private industry establishments report changes in health benefit plans during the first quarter of each year, typically reflecting any changes that may come

about from yearly plan renewals. Some of the underlying methods (e.g., for handling missing data) have changed over the years, but we believe that the measures shown in table 1 are broadly compatible over the entire period. Note that, although the imputation scheme used in this article is similar to the one used by the NCS in constructing the measures reported in its publications on the incidence of benefits, it is not identical. The main differences are in (a) the way jobs for which the respondent refused to divulge whether any plan was present in 2003 were treated (we treat such observations as missing-at-random) and (b) the specification of how “nearest neighbors” were determined (we prioritize the key variables of interest in our tables: establishment size, full-time status, unionization, and job-based wage quartile, in that order). The scheme we use ensures better compatibility between the estimated values for different years, as well as more accurately capturing the between-group differences we examine in the later tables.

The measures shown in tables 2–9 were built up from the NCS microdata from 2003 and 2012 by using the job-based weights accounting for the probability of the job’s selection into the sample as well as various kinds of weight refinements, such as those accounting for establishment- or job-based nonresponse. Item nonresponse was handled by imputation using a nearest neighbor procedure. Most of the variables reported in the tables are collected directly from the data source; for example, establishment size (number of employees) is a variable that is collected directly in NCS interviews. But two variables merit special explanation. First, “job-based wage quartile” denotes the assignment of each job-based observation into one of four categories indicating which portion of the measured wage distribution the reported average wage of workers in the job fell into. To generate this variable, we first determined cutoffs for each wage quartile by taking the reported job-based wages and computing their 25th, 50th (median), and 75th quantile values (using the job-based weights so that these quantiles are estimates of the population). We then used the quantile values to assign individual observations to one of the four quartiles. As regards “establishment-based quartiles,” we first averaged the observed job-based wage rates within each establishment and then applied the same procedure that we used for generating the job-based quartiles to the establishment-based wage rates to determine the establishment-based wage quartiles.

Notes

¹ Elise Gould, “Employer-sponsored health insurance continues to decline in a new decade,” EPI Briefing Paper (Washington, DC: Economic Policy Institute, December 5, 2012).

² See the discussion in Janet Currie and Brigitte C. Madrian, “Health, health insurance and the labor market,” in Orley Ashenfelter and David Card, eds., *Handbook of labor economics*, vol. 3, EconPapers, chapter 50, pp. 3309–3416 (New York: Elsevier, 1999).

³ Percentages are based on data derived from *Employer cost for employee compensation* (U.S. Bureau of Labor Statistics, March 1991 and March 2012).

⁴ Percentages are based on data derived from the BLS Employment Cost Index.

⁵ For simplicity, we refer to the Patient Protection and Affordable Care Act and the companion Health Care and Education Reconciliation Act as the Affordable Care Act.

⁶ The takeup rate is the percentage of workers with access to a plan who participate in the plan.

⁷ A discussion of the provisions and impacts of the act is beyond the scope of this article, but for summaries of the provisions, see “Summary of coverage provisions in the Affordable Care Act,” *Focus on Health Reform*, publication #8023-R (Menlo Park, CA: Henry J. Kaiser Family Foundation, July 17, 2012); and “Summary of the Affordable Care Act,” *Focus on Health Reform*, publication #8061-02 (Menlo Park, CA: Henry J. Kaiser Family Foundation, April 25, 2013). For examples of analyses of the expected impact of the act on EBHI, see Kosali Simon, *Implications of health reform for employers: an analysis of the Patient Protection and Affordable Care Act* (Washington, DC: Center for American Progress, May 2010); and Linda Blumberg, Matthew Buettgens, Judy Feder, and John Holahan, “Why employers will continue to provide health insurance: the impact of the Affordable Care Act,” *Timely analysis of immediate health policy issues* (Washington, DC: Urban Institute, October 2011).

⁸ The years 2001 and 2002 are excluded here, to account for the change in the Employment Cost Index (ECI) sampling methodology that took place during this transition period. Also, starting with 2003, we have removed jobs that remained in the ECI sample after having been sampled under the old scheme, unless they were resampled in 2003 or after. This approach gives us confidence that the access rates in the table are broadly consistent over the period examined.

⁹ In the NCS sample, the increase in the fraction working part time corresponds to a similar increase seen in other sources, such as the Current Population Survey.

¹⁰ Philip F. Cooper and Barbara S. Schone, “More offers, fewer takers for employment-based health insurance: 1987 and 1996,” *Health Affairs*, November 1997, pp. 142–149.

¹¹ David M. Cutler, “Employee costs and the decline in health insurance coverage,” in David M. Cutler and Alan M. Garber, *Frontiers in Health Policy Research*, vol. 6, pp. 27–53 (Cambridge MA: The MIT Press (for the National Bureau of Economic Research), 2003).

¹² Jessica Vistnes, Alice Zawacki, Kosali Simon, and Amy Taylor, “Declines in employer-sponsored insurance between 2000 and 2008: examining the components of coverage by firm size,” *Health Services Research*, June 2012, pp. 919–938.

¹³ The offer rates computed by Vistnes and colleagues are conceptually similar to the access rates reported in this article and in other NCS publications, although in practice the two measures are not identical. The difference is that the former are measured at the establishment level, the latter at the job level. The two rates will differ when workers in some jobs in an establishment are offered health insurance while workers in another job are not—as, for example, when full-time employees have access but part-time employees do not. In this case, all the workers in the establishment will contribute to the offer rate but only some of the workers will contribute to the access rate.

¹⁴ Health plans provide preventive and protective medical, dental, vision, or prescription drug coverage to employees and their families. Medical plans either provide payments for services rendered in the hospital or by a qualified medical care provider or provide the services themselves. (See *National Compensation Survey glossary of employee benefit terms* (U.S. Bureau of Labor Statistics, July 2012), <http://www.bls.gov/ncs/ebs/glossary20112012.pdf>.)

¹⁵ See the appendix for a discussion of how these wage quartiles were computed.

¹⁶ See the appendix for a discussion of how these establishment-level wages were computed.

¹⁷ In this article, statistical significance is held to obtain at $p < .1$. In accordance with the policies of the Office of Compensation and Working Conditions, all articulated comparisons of the data have passed such a statistical test, unless otherwise noted.

¹⁸ To provide a statistical test of this statement, a simple regression was run of access on the six establishment size categories in each year; the estimated coefficients (.092 in 2003 and .094 in 2012) were both significant at the .001 level.

¹⁹ Vistnes, Zawacki, Simon, and Taylor, “Declines in employer-sponsored insurance between 2000 and 2008.”

²⁰ See, for example, tables 3 and 4 in “Employee Benefits in the United States—March 2013,” BLS News Release USDL-13-1344, July 17, 2013, <http://www.bls.gov/ncs/ebs/sp/ebnr0019.pdf>.

²¹ Simple regressions of the premiums on the establishment size identifier illustrate these points. In 2003, the coefficient of the size category for employee premiums was –13.56; in 2012, it was –34.43. For the employer premiums, the corresponding figures were (an insignificant) 2.07 and 55.74, respectively.

²² See also the associated publications for 2003 and 2012: *National Compensation Survey: employee benefits in private industry in the United States, March 2003*, Summary 04-02 (U.S. Bureau of Labor Statistics, April 2004), <http://www.bls.gov/ncs/ebs/sp/ebsm0001.pdf>; and *National Compensation Survey: employee benefits in the United States, March 2012*, Bulletin 2773 (U.S. Bureau of Labor Statistics, September 2012), <http://www.bls.gov/ncs/ebs/benefits/2012/ebbl0050.pdf>.

²³ Prior to 2001, the ECI had its own sample design. Between 2001 and 2006, the index transitioned from having its own samples to having its samples drawn as part of the larger NCS. During this period, it contained some sample members from each design. The sample on the incidence of benefits from 2003 to 2012 used in this article, however, consisted only of members selected on the basis of the NCS design. (Older units were excluded.) For more information about the phase-in of the NCS sample, see Jason Tehonica, Lawrence R. Ernst, and Chester H. Ponikowski, “Phase-in of the redesigned National Compensation Survey area sample,” *Proceedings of the American Statistical Association*, section on survey research methods (Alexandria, VA: American Statistical Association, 2005), pp. 2993–2997, <https://www.amstat.org/sections/srms/proceedings/y2005/Files/JSM2005-000156.pdf>.

²⁴ For more information about the collection of NCS data, see Chapter 8, “National compensation measures,” *BLS Handbook of Methods* (U.S. Bureau of Labor Statistics), <http://www.bls.gov/opub/hom/pdf/homch8.pdf>.

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